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IFN β G162C-Ig direct fusion construct open reading frame

1 ATGCCCTGGGAAGATGGTCGTGATCCCTTGGAGCCTCAAATATACTTTGGATAATGTTTCCA 60
M P G K M V V I L G A S N I L W I M F A

61 GCTTCTCAAGCCATGAGCTACAACTTGCTTGGATTCCCTACAAAGAAGCAGCAATTTTCAG 120
A S Q A M S Y N L L G F L Q R S S N F Q

121 TGTCAAGAAGCTCCTGTGGCAATTGAATGGGAGGCTTGAATACTGCCCTCAAGGACAGGATG 180
C Q K L L W Q L N G R L E Y C L K D R M

181 AACTTTGACATCCCTGAGGAGATTAAAGCAGCTGCAGCAGTCCAGAAGGAGGACGCCGCA 240
N F D I P E E I K Q L Q Q F Q K E D A A

241 TTGACCATCTATGAGATGCTCCAGAAACATCTTTGCTATTTTCAGACAAGATTCACTTAGC 300
L T I Y E M L Q N I F A I F R Q D S S S

301 ACTGGCTGGAATGAGACTATTGTTGAGAACCTCCTGGCTAATGTCTATCATCAGATAAAC 360
T G W N E T I V E N L L A N V Y H Q I N

361 CATCTGAAGACAGTCCCTGGAAGAAAACCTGGAGAAAGAAGATTTCACCGAGGGAACAAC 420
H L K T V L E E K L E K E D F T R G K L

421 ATGAGCAGTCTGCACCTGAAAAGATATTATGGGAGGATTCTGCATTACCTGAAGGCCAAG 480
M S S L H L K R Y Y G R I L H Y L K A K

FIG. 1 A

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481 GAGTACAGTCACTGTGCCTGGACCATAGTCAGAGTGGAAATCCTAAGGAACTTTTACTTC 540
E Y S H C A W T I V R V E I L R N F Y F
541 ATTAACAGACTTACATGTTACCTCCGAAACGTGACAAAACTCACACATGCCACCGTGC 600
I N R L T C Y L R N V D K T H T C P P C
601 CCAGCACCTGAACTCCTGGGGGACCGTCAGTCTTCTCTTCCCCCAAAACCCAAAGGAC 660
P A P E L L G G P S V F L F P P K P K D
661 ACCCTCATGATCTCCCGGACCCCTGAGGTCACATGCGTGGTGGTGGACGTGAGCCACGAA 720
T L M I S R T P E V T C V V D V S H E
721 GACCCTGAGGTCAAGTTCACTGTAACGTGGACGGCGTGGAGGTGCATAATGCCAAGACA 780
D P E V K F N W Y V D G V E V H N A K T
781 AAGCCGCGGAGGAGCAGTACAACAGCACGTACCGTGTGTGTCAGCGTCTCACCCTCTG 840
K P R E E Q Y N S T Y R V V S V L T V L
841 CACCAGGACTGGCTGAATGGCAAGGAGTACAAGTCAAGTCTCCAAQAAGCCCTCCCA 900
H Q D W L N G K E Y K C K V S N K A L P
901 GCCCCCATCGAGAAAACCATCTCCAAAGCCAAAGGGAGCCCCGAGAACCCACAGGTGTAC 960
A P I E K T I S K A K G Q P R E P Q V Y

FIG. 1 B

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961 ACCCTGCCCCCATCCCGGGATGAGCTGACCAAGAACCAGGTCAGCCTGACCTGCCCTGGTC 1020
T L P P S R D E L T K N Q V S L T C L V

1021 AAAGGCTTCTATCCCGCGACATCGCCGTGGAGTGGGAGAGCAATGGCAGCCGGAGAAC 1080
K G F Y P S D I A V E W E S N G Q P E N

1081 AACTACAAGACACGCCCTCCCGTGTGGACTCCGACGGCTCCTTCTCTCTACAGCAAG 1140
N Y K T T P P V L D S D G S F L Y S K

1141 CTCACCGTGGACAAGAGCAGGTGGCAGCAGGGGAACGCTTCTCATGTCTCCGTGATGCAT 1200
L T V D K S R W Q Q G N V F S C S V M H

1201 GAGGCTCTGCACAACCACTACACGAGAGCCCTCTCCCTGTCTCCCGGGAATGA 1257
E A L H N H Y T Q K S L S L S P G K *

FIG. 1 C

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IFN β G162C-Ig fusion G4S linker construct open reading frame

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1  ATGCTGGGAAGATGGTCGTGATCCCTTGGAGCCCTCAATATATACTTTGGATAATGTTTCCA 60
   M P G K M V V I L G A S N I L W I M F A

61  GCTTCTCAAGCCATGAGCTACAACTTGCTTGGATTCTTACAAAGACAGCAATTTTCAG 120
   A S Q A M S Y N L L G F L Q R S S N F Q

121  TGTCAAGAGCTCCTGTGGCAATTGAATGGGAGGCTTGAATACTGCTCAAGGACAGGATG 180
   C Q K L L W Q L N G R L E Y C L K D R M

181  AACTTTGACATCCCCTGAGGAGATTAAAGCAGCTGCAGCAGTTCCAGAAAGGAGGACGCCGCA 240
   N F D I P E E I K Q L Q Q F Q K E D A A

241  TTGACCATCTATGAGATGCTCCAGAACATCTTTGCTATTTTCAGACAAAGATTCTATAGC 300
   L T I Y E M L Q N I F A I F R Q D S S S

301  ACTGGCTGGAATGAGACTATTGTTGAGAACCTCCTGGCTAATGCTATCATCAGATAAAC 360
   T G W N E T I V E N L L A N V Y H Q I N

361  CATCTGAAGACAGTCCTGTGGAAGAAAACCTGGAGAAAGAGATTTCACCGGGGAAACATC 420
   H L K T V L E E K L E K E D F T R G K L

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FIG. 2A

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421 ATGAGCAGTCTGCACCTGAAAAGATATTATGGAGGATTCTGCATTACCTGAAGGCCAAG 480
M S S L H L K R Y Y G R I L H Y L K A K
481 GAGTACAGTCACTGTGCTGGACCATAGTCAGAGTGGAAATCCCTAAGGAACCTTTACTTC 540
E Y S H C A W T I V R V E I L R N F Y F
541 ATTAACAGACTTACATGTACCTCCGAAACGGCGGTGGCAGCGTCGACAAACTCAC 600
I N R L T C Y L R N G G G S V D K T H
601 ACATGCCCCCGTGCCCGACACCTGAACCTCTGGGGGACCGTCAGTCTCTCTTCCCC 660
T C P P C P A P E L L G G P S V F L F P
661 CCATAACCCAGGACACCCCTCATGATCTCCCGGACCCCTGAGGTCAATGCGTGGTG 720
P K P K D T L M I S R T P E V T C V V V
721 GACGTGAGCCACGAAGACCCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGTGGAGTG 780
D V S H E D P E V K F N W Y V D G V E V
781 CATAATGCCAAGACAAAGCCGGGAGGAGCAGTACAACAGCACGTACCGTGTGGTCAGC 840
H N A K T K P R E E Q Y N S T Y R V V S
841 GTCCTCACCGTCTGCACCAAGGACTGGCTGAATGCAAGGAGTACAAGTCAAGGTCTCC 900
V L T V L H Q D W L N G K E Y K C K V S
901 AACAAAGCCCTCCAGCCCCCATCGAGAAACCATCTCCAAGCCAAAGGCAGCCCGCA 960
N K A L P A P I E K T I S K A K G Q P R

FIG. 2B

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961 GAACCAAGGTGTACACCCCTGCCCCCATCCCGGATGAGCTGACCAAGAACCAAGTTCAGC 1020
E P Q V Y T L P P S R D E L T K N Q V S

1021 CTGACCTGCCCTGCTCAAAGGCTTCTATCCAGCGACATCGCCGTTGGAGTGGAGAGCAAT 1080
L T C L V K G F Y P S D I A V E W E S N

1081 GGGCAGCCGGAGAACTACAAGACCAAGCCCTCCCGTGTGGACTCCGACGGCTCCTTC 1140
G Q P E N N Y K T T P P V L D S D G S F

1141 TTCCCTTACAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCAGGGGAACGTTCTTCA 1200
F L Y S K L T V D K S R W Q Q G N V F S

1201 TGCTCCGTGATGCATGAGGCTCTGCACAAACCACTACACGACAGAGCCCTCTCCCTGTCT 1260
C S V M H E A L H N H Y T Q K S L S L S

1261 CCCGGGAAATGA 1272
P G K *

FIG. 2 C

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FIG. 3

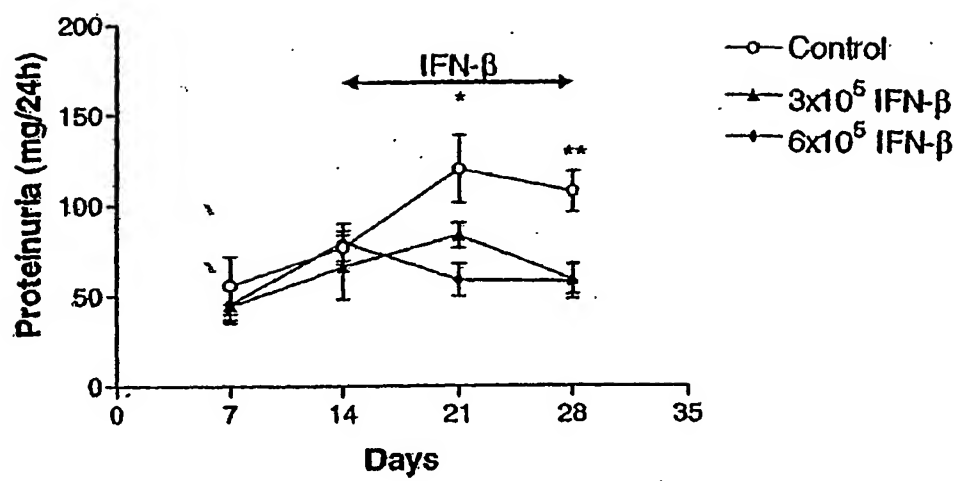


FIG. 4

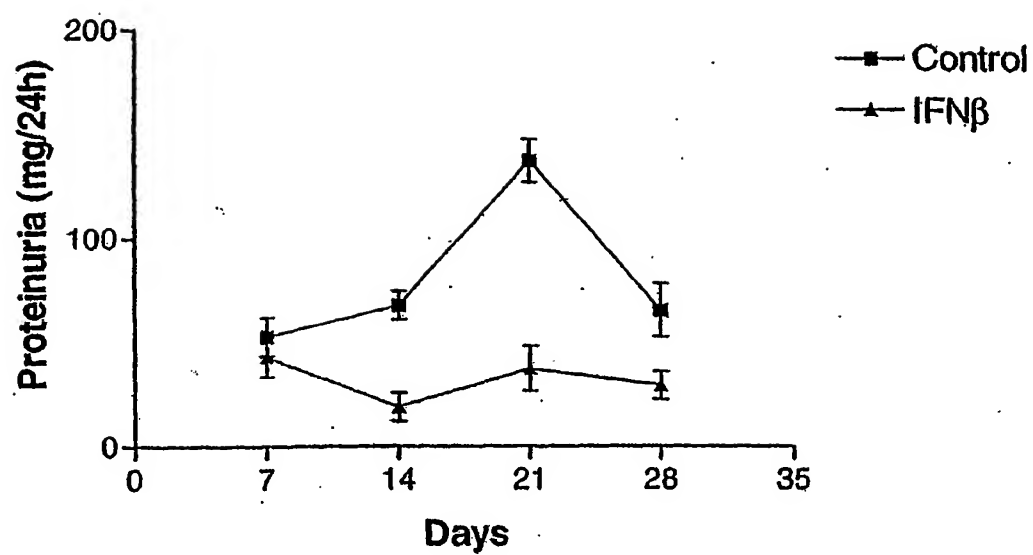


FIG. 6

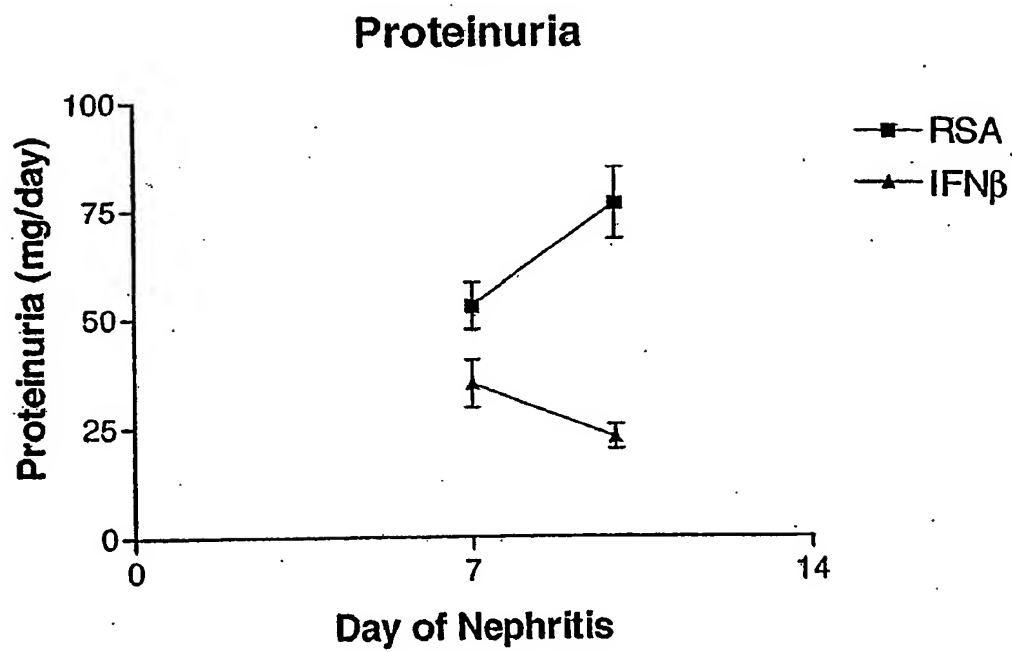


FIG. 7

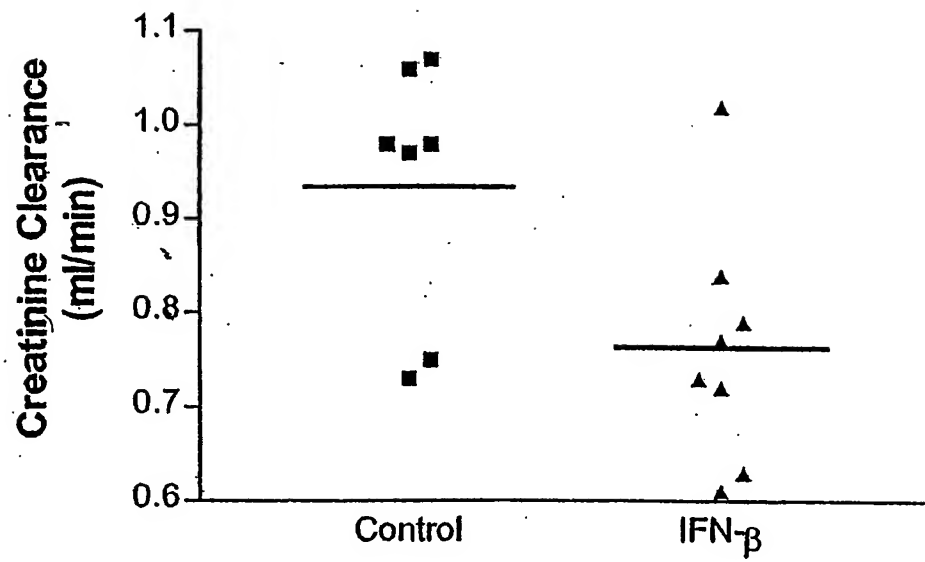


FIG. 8

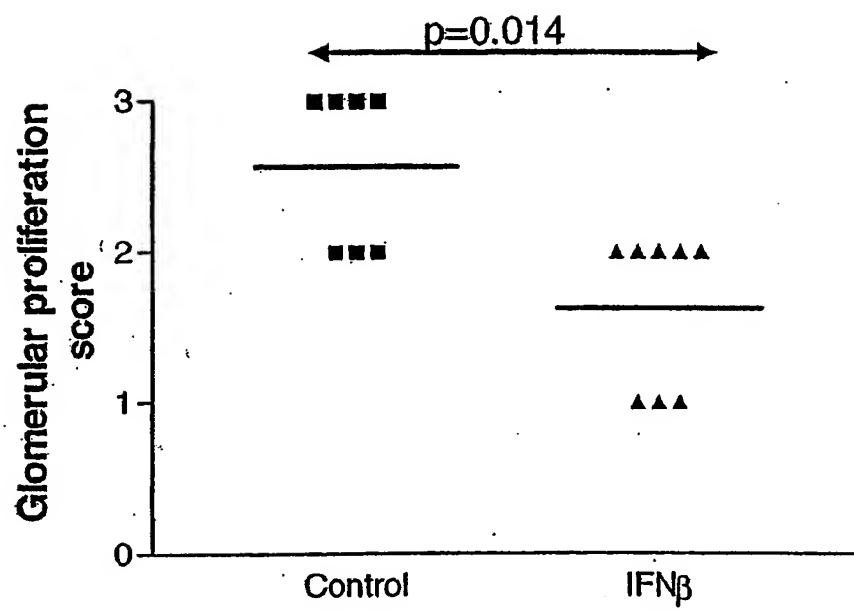
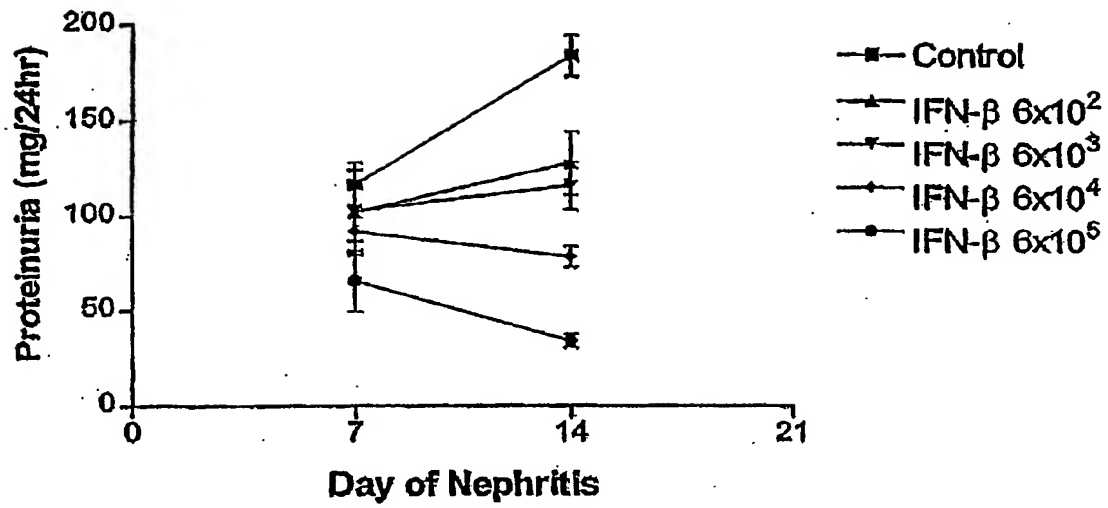


FIG. 9



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